What is claimed is:

1. An isolated nucleic acid molecule comprising a polynucleotide having a sequence at least 95% identical to a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding a human sel-10 polypeptide having the complete amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, and SEQ ID NO:7, or as encoded by the cDNA clone contained in ATCC Deposit No.98978;

(b) a nucleotide sequence encoding a human sel-10 polypeptide having the complete amino acid sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, and SEQ ID NO:10, or as encoded by the cDNA clone contained in ATCC Deposit No. 98979; and

(c) a nucleotide sequence complementary to the nucleotide sequence of (a) or (b).

2. An isolated nucleic acid molecule comprising polynucleotide which hybridizes under stringent conditions to a polynucleotide having the nucleotide sequence in (a), (b), or (c) of claim 1.

3. The nucleic acid molecule of claim 1, wherein said polynucleotide of 1(a) encodes a human sel-10 polypeptide having the complete amino acid sequence of SEQ ID NO:3.

4. The nucleic acid molecule of claim 3, wherein said polynucleotide molecule of 1(a) comprises the nucleotide sequence of residues 45-1928 of SEQ ID NO:1.

5. The nucleic acid molecule of claim 1, wherein said polynucleotide of 1(a) encodes a human sel-10 polypeptide having the complete amino acid sequence of SEQ ID NO:4.

6. The nucleic acid molecule of claim 5, wherein said polynucleotide molecule of 1(a) comprises the nucleotide sequence of residues 150-1928 of SEQ ID NO:1.

7. The nucleic acid molecule of claim 1, wherein said polynucleotide of 1(a) encodes a human sel-10 polypeptide having the complete amino acid sequence of SEQ ID NO:5.

8. The nucleic acid molecule of claim 7, wherein said polynucleotide molecule of 1(a) comprises the nucleotide sequence of residues 267-1928 of SEQ ID NO:1.

9. The nucleic acid molecule of claim 1, wherein said polynucleotide of 1(a) encodes a human sel-10 polypeptide having the complete amino acid sequence of SEQ ID NO:6.

10 The nucleic acid molecule of claim 9, wherein said polynucleotide molecule of 1(a) comprises the nucleotide sequence of residues 291-1928 of SEQ ID NO:1.

11. The nucleic acid molecule of claim 1, wherein said polynucleotide of 1(a) encodes a human sel-10 polypeptide having the complete amino acid sequence of SEQ ID NO:7.

12. The nucleic acid molecule of claim 11, wherein said polynucleotide molecule of 1(a) comprises the nucleotide sequence of residues 306-1928 of SEQ ID NO:1.

13. The nucleic acid molecule of claim 1, wherein said polynucleotide of 1(b) encodes a human sel-10 polypeptide having the complete amino acid sequence of SEQ ID NO:8.

14. The nucleic acid molecule of claim 13 wherein said polynucleotide molecule of 1(b) comprises the nucleotide sequence of residues 180-1949 of SEQ ID NO:2.

15. The nucleic acid molecule of claim 1, wherein said polynucleotide of 1(b) encodes a human sel-10 polypeptide having the complete amino acid sequence of SEQ ID NO:9.

16. The nucleic acid molecule of claim 15, wherein said polynucleotide molecule of 1(b) comprises the nucleotide sequence of residues 270-1949 of SEQ ID NO:2.

17. The nucleic acid molecule of claim 1, wherein said polynucleotide of 1(b) encodes a human sel-10 polypeptide having the complete amino acid sequence of SEQ ID NO:10.

18. The nucleic acid molecule of claim 17, wherein said polynucleotide molecule of 1(b) comprises the nucleotide sequence of residues 327-1949 of SEQ ID NO:2.

19. A vector comprising the nucleic acid molecule of claim 1.

20. The vector of claim 19, wherein said nucleic acid molecule of claim 1 is operably linked to a promoter for the expression of a sel-10 polypeptide.

21. A host cell comprising the vector of claim 19.

22. The host cell of claim 21, wherein said host is a eukaryotic host.

23. A method of obtaining a sel-10 polypeptide comprising culturing the host cell of claim 22 and isolating said sel-10 polypeptide.

24. An isolated sel-10 polypeptide comprising

(a) an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, and SEQ ID NO:7, or as encoded by the cDNA clone contained in ATCC Deposit No. 98978;

(b) an amino acid sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, and SEQ ID NO:10, or as encoded by the cDNA clone contained in ATCC Deposit No. 98979.

25. The isolated sel-10 polypeptide of claim 24, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:3.

26. The isolated sel-10 polypeptide of claim 24, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:4.

27. The isolated sel-10 polypeptide of claim 24, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:5.

28. The isolated sel-10 polypeptide of claim 24, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:6.

29. The isolated sel-10 polypeptide of claim 24, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:7.

30. The isolated sel-10 polypeptide of claim 24, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:8.

31. The isolated sel-10 polypeptide of claim 24, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:9.

32. The isolated sel-10 polypeptide of claim 24, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:10.

33. An isolated antibody that binds specifically to the sel-10 polypeptide of claim 24.

34. A cell line having altered Aβ processing that expresses any of the sel-10 isolated nucleic acid molecules of claim 1.

35. The cell line of claim 34, wherein said Aβ processing is increased.

36. The cell line of claim 34, wherein said Aβ processing is decreased.

37. The cell line of claim 34, wherein said cell line is 6myc-N-sel10/2.

38. The cell line of claim 34, wherein said cell line is 6myc-N-sel10/6.

39. A method for the identification of an agent capable of altering the ratio of $A\beta_{1-40}/ A\beta_{1-40} + A\beta_{1-42}$ produced in any of the cell lines of claims 34, 37, and 38, comprising the steps of:

(a) obtaining a test culture and a control culture of said cell line;

(b) contacting said test culture with a test agent;

(c) measuring the levels of $A\beta_{1-40}$ and $A\beta_{1-42}$ produced by said test culture of step (b) and said control culture;

(d) calculating the ratio of $A\beta_{1-40}/ A\beta_{1-40} + A\beta_{1-42}$ for said test culture and said control culture from the levels of $A\beta_{1-40}$ and $A\beta_{1-42}$ measured in step (c); and

(e) comparing the ratio of $A\beta_{1-40}/ A\beta_{1-40} + A\beta_{1-42}$ measured for said test culture and said control culture in step (d);

whereby a determination that the ratio of $A\beta_{1-40}/ A\beta_{1-40} + A\beta_{1-42}$ for said test culture is higher or lower than ratio of $A\beta_{1-40}/ A\beta_{1-40} + A\beta_{1-42}$ for said control culture indicates that said test agent has altered the ratio of $A\beta_{1-40}/ A\beta_{1-40} + A\beta_{1-42}$.

40. The method of claim 39, wherein said ratio of $A\beta_{1-40}/ A\beta_{1-40} + A\beta_{1-42}$ is increased by said test agent.

41. The method of claim 39, wherein said ratio of $A\beta_{1-40}/ A\beta_{1-40} + A\beta_{1-42}$ is decreased by said test agent.

add B'